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## **THE WORKING SESSION.**

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The session for exhibiting methods of work and microscopical research was held in LeGrand Rink on Euclid Avenue, cor. Kenard street, on Thursday afternoon, August 20, 1885, commencing at 2 o'clock, P. M., and continuing during the afternoon.

On December 29, 1884, the Executive Committee unanimously delegated to Mr. C. M. Vorce, of Cleveland, the work of organizing the Working Session and preparing for its demonstrations, and allotted to the working session one entire afternoon of the meeting as the utmost of time that could be spared for that especial purpose.

Mr. Vorce accepted the responsibility, and at once set about the preparations for the session. After correspondence with several members of the Society Mr. Vorce published in *The Microscope* for February, 1885, and in *The American Monthly Microscopical Journal* for March, 1885, a scheme of work which he had planned for the Working Session, and in the execution of which he solicited the assistance of members.

Demonstrators for nearly all the themes embraced in the published scheme of work were secured, but before the meeting convened several of the demonstrators found themselves prevented by various causes from attendance, and, after filling such vacancies as could be filled in the short time allowed, after the opening of the meeting the following demonstrations were presented:

### **SCHEDULE OF DEMONSTRATIONS.**

#### *Tables 3 and 4.*

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| <p>WM. H. WALMSLEY, F. R. M. S.,<br/>Photo-micrography by lamplight.</p> <p>ROBERT DAYTON, M. D.,<br/>Gelatino-bromide enlargement by lamplight, and photo-micrography by sunlight, in smoking-room, southeast corner of building.</p> | <p>PHILADELPHIA, PA.</p> <p>CLEVELAND, O.</p> |
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*Tables 5 and 6.*

GEO. E. FELL, M. D., F. R. M. S., - - - - BUFFALO, N. Y.

Methods of micrometry and U. S. standard micrometer, the standard for minute measurements, furnished by U. S. Bureau of Weights and Measures.

*Tables 7 and 8.*

W. H. BULLOCH, F. R. M. S., - - - - CHICAGO, ILL.

Comparator for testing and measuring micrometers, and method of testing, etc. Cob-web micrometer for measurements and steel standard with methods of measurement. Micrometer stage.

*Tables 9 and 10.*

C. M. VORCE, F. R. M. S., - - - - CLEVELAND, O.

Secondary stage for micrometry of blood, etc., and method of measurement.

*Tables 11 and 12.*

T. J. BURRILL, Ph. D., F. R. M. S., - - - - CHAMPAIGNE, ILL.

Cultivating Bacteria, etc., exposition of different methods and apparatus.

*Tables 13 and 14.*

A. H. TUTTLE, Ph. D., F. R. M. S., - - - - COLUMBUS, O.

Staining tissues in mass, simple and compound stainings.

*Table 15.*

L. M. EASTMAN, M. D., - - - - BALTIMORE, MD.

Staining sections, simple and compound stainings, animal sections.

*Table 17.*

GEO. DUFFIELD, M. D., - - - - DETROIT, MICH.

Cutting sections of soft tissues. Schanzi microtome.

*Table 18.*

H. E. SUMMERS, Cornell University, - - - - ITHACA, N. Y.

Cutting serial sections (Prof. S. H. Gage's methods), Bauch and Lomb's New Microtome.

*Table 19.*

E. H. SARGENT, Cornell University, - - - - ITHACA, N. Y.

Imbedding in celloidin and cutting sections in celloidin. Bausch and Lomb's New Microtome.

*Table 20.*

LESTER CURTIS, M. D., F. R. M. S., - - - - CHICAGO, ILL.

Section cutting with Bulloch's New Microtome.

*Tables 21 and 22.*

- F. O. JACOBS, M. D., D. D. S., - - - - - NEWARK, O.  
 Section cutting with Jacobs' New Freezing Microtome. Cutting sections of teeth, etc.

*Table 23.*

- ALLAN Y. MOORE, M. D. - - - - - CLEVELAND, O.  
 Practical demonstration of the relation of aperture to power in microscope objectives.

*Table 24.*

- F. S. NEWCOMER, M. D., - - - - - INDIANAPOLIS, IND.  
 Uses of the mechanical finger, application to research, etc.

*Table 26.*

- S. M. MOSGROVE, M. D., . - - - - - URBANA, O.  
 Application of electric light to microscopy.

*Table 27.*

- D. S. KELLICOTT, Ph. D., F. R. M. S. - - - - - BUFFALO, N. Y.  
 Uses of life boxes, growing cells, troughs, compressors, etc.

*Table 28.*

- S. HUDSON, M. D., - - - - - MEDINA, O.  
 Urine and pus.

*Table 29.*

- HENRY MILLS, - - - - - BUFFALO, N. Y.  
 Preparing and mounting sponges.

*Table 30.*

- R. N. REYNOLDS, - - - - - DETROIT, MICH.  
 Staining and mounting Bacteria.

*Table 31.*

- THOS. TAYLOR, M. D., - - - - - WASHINGTON, D. C.  
 Examining butter and fats.

*Tables 33 and 34.*

- FRANK L. JAMES, Ph. D., M. D., - - - - - ST. LOUIS, MO.  
 The preparation and application of cements, formulas, etc.

*Table 35.*

- C. WELLINGTON, - - - - - JACKSON, MICH.  
 Mounting vegetable sections.

*Table 36.*

E. H. GRIFFITH, A. M., F. R. M. S., - - - FAIRPORT, N. Y.

Finishing slides.

*Table 37.*

FRANK F. COLWELL, - - - - - URBANA, O.

Mounting and finishing slides.

*Table 38.*

J. O. STILLSON, M. D., - - - - - INDIANAPOLIS, IND.

Mounting and finishing slides and general microscopical work.

**EXHIBIT OF SPECIAL APPARATUS.**

Table space was provided on the north side of the hall at which exhibits of instruments, accessories and apparatus were made by The Bausch & Lomb Optical Company, Messrs. J. W. Queen & Co., Messrs. W. H. Walmsley & Co., W. H. Bulloch, Messrs. F. J. Emerich & Co., The Geneva Optical Co., C. E. Hanaman, Esq. Special apparatus was also exhibited by several of the demonstrators on the tables occupied by them in the Working Session.

**PHOTOGRAPHIC EXHIBIT.**

Photo-micrographs exhibited by the following-named persons were arranged upon large cards and displayed upon the walls:

R. L. MADDOX, M. D., F. R. M. S., London, Eng.

DR. HENRI VAN HEURCK, Director Botanical Garden, Antwerp.

PROF. H. L. SMITH, F. R. M. S., Geneva, N. Y., Photographs by Dr. J. J. Woodward, etc.

MAJ. GEO. M. STERNBERG, M. D., U. S. A., Washington, D. C.

GEO. A. PIERSOL, M. D., Philadelphia, Pa.

W. H. WALMSLEY, F. R. M. S., Philadelphia, Pa.

CHRISTIAN FEBIGER, Esq., Wilmington, Del.

HON. J. D. COX, F. R. M. S., Cincinnati, O.

J. L. SMITH, New York City.

P. H. DUDLEY, New York City.

A. G. HOEHN, M. D., Baltimore, Md.

REV. ED. HUBER, Baltimore, Md.

ROB'T DAYTON, M. D., Cleveland, O.

C. M. VORCE, F. R. M. S., Cleveland, O.

H. J. DETMERS, M. D., Champaigne, Ill.

Prof. C. RICHARDSON, Washington, D. C.

The photographs were accompanied by memoranda as to power and objectives used, light employed, time of exposure, kind of plate and developer used, etc., and proved of great service to those not fully versed in the art of photo-micrography.

Miss M. A. Booth distributed to the members present samples of Atlantic coast diatoms procured and prepared by herself, and Mr. Vorce distributed samples of Mobile Bay diatoms forwarded to him for that purpose by Dr. Geo. H. Taylor of Mobile, Ala., and samples of diatomaceous earth from Denver, Col., forwarded by H. B. Chamberlin, Esq., of Denver.

Dr. Taylor furnished the following description of the method by which the samples he furnished were prepared:

#### ***WATERWASHED DIATOMS.***

DR. GEO. H. TAYLOR'S METHOD.

A quantity of the mud containing the diatoms is placed in a large jar with two or three times its bulk of clean water and thoroughly shaken up. After settling for ten minutes about half the water is poured off into another jar, and the first is refilled, shaken, allowed to settle as before, and most of the water poured off. This process is kept up until the water is perfectly clear at the end of ten minutes. The light portions poured off are saved for future treatment.

The heavy material which contains all but the smallest diatoms, has much sand mixed with it. To get rid of this it is shaken up in the jar of water, and the top part almost immediately poured off. This is repeated several times, refilling the jar with pure water each time until the heavy sand remaining shows but few diatoms mixed with it. The material obtained by the last pourings, consisting of nearly all the diatoms, and the *fine* sand is now boiled in water with the addition of a little cooking soda. After which it is placed in a large bottle filled with pure water, shaken up, and after standing five minutes poured off. The bottle is refilled and the process continued for several hours, the time of settling being gradually reduced to three, or even two minutes. The remaining material is then placed in a shallow concave dish, a little at a time, with a small amount of water, and gently rocked and rotated, by which the diatoms